P0507

Sleep-Apnoea-Syndrome (SAS) -Screening in Trauma Patients – Significance for Prevention

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Introduction and aim of study: An often reported problem in the history of patients with Sleep-Apnoea-Syndrome (SAS) is an increased frequency of trauma, emphasizing it's degree of severity [2]. This is explainable through a tendency to sleep during daytime and disturbances of concentration by a fragmentation of the sleep stages. In a former study [1] we have shown, that in a regular group of patients, entering an emergency room directly after an accident the prevalence of significant anamnestic indications for a SAS – as there are regular snoring, tiredness during the day and imperative impulse to fall asleep and frequently observed apnea – is significantly higher in those patients with multiple accidents in the past three years compared to those with a single accident in this period. Therefore the above-mentioned cardinal symptoms of SAS should be explored while taking the trauma-specific history. Especially in relation with multiple accidents they require further diagnostics and if necessary therapy.
Methods: Consequently in this study from February 1st, 1995 to January 31st, 1996 we have proved the results of a SAS-monitoring with the APNOESCREEN-I ® in patients of a trauma-care ward respecting strict excluding criterias, s.e alcohol consum, cerebral, cardial and circulatory diseases ecc. 186 patients between 35 and 65 years of age were interviewed during the first 10 days after a self caused accident, where 122 showed symptoms pointing out a possible SAS (65.6%). Of those, 53 could be recorded and scored with this portable monitoring system.
Results and conclusion: 22 patients could be classified as with an apnea-index of ≥ 10/h *and* a desaturation-index of ≥ 10/h. Another 22 patients could be classified as limited SAS-positive with an apnea-index of ≥ 10/h *or* a desaturation-index of ≥ 10/h. 9 patients were scored as SAS-negative with an apnea-index and a desaturation-index of < 10/h. The high percentage of SAS-positive (41.5%) and limited SAS-positive (41.5%) patients in this group of trauma-patients with symptoms pointing out a possible SAS, indicates the need of accurate SAS-related history-taking and also SAS-monitoring also on a trauma-surgical ward. This is important for an adequate therapy, but also for serious accident-prevention.

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P0508

Effect of Mandibular Advancement Splint on Psychological Function in Patients with Obstructive Sleep APNEA

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Five patients with obstructive sleep apnea (OSA) were treated with mandibular advancement splint (MAS) which held the mandible anteriorly and increased the oropharyngeal and hypopharyngeal dimension. There was a significant decrease of apneaic and hypoxemic episodes during sleep after a few weeks of MAS treatment. Apnea hypopnea index decreased from 24.4 ± 16.2 to 3.0 ± 2.8 ($p < 0.01$) and the number of apneaic episodes decreased from 216.0 ± 140.7 to 24.8 ± 22.0/night ($p < 0.01$). State anxiety score decreased from 47.0 ± 11.3 to 43.5 ± 7.0 ($p < 0.01$) and trait anxiety score decreased from 47.0 ± 13.1 to 41.8 ± 8.5% ($p < 0.01$). The SDS (self-rating depression scale score decreased from 38.4 ± 14.7 to 36.0 ± 9.3% ($p < 0.01$). By CMI, and Yatabe-Gillford test, the patients became less neurotic and less eccentric after treatment. We conclude that MAS treatment has favorable effects on psychological derangements in patients with OSA.

Case	Cornell Medical Index		Yatabe-Gillford Test	
	No MAS	MAS	No MAS	MAS.
HS	almost neurotic	prob. neurotic	eccentric	average
TK	almost normal	normal	non classifiable	
SK	normal	normal	calm	average and calm
TH	almost neurotic	almost normal	director	director
KT	normal	normal	average	average.

P0509

Spirometry in General Practice: The Performance of Practice Assistants

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Background: Although the use of spirometers in general practice is rising, the quality of spirometry procedures, performed by practice assistants (PA), has never been studied.
Methods: The spirometry performances of 13 PAs were recorded on videotape. A score list was developed adhering to international recommendations. (13 items on instruction and 7 on performance). Qualified lung function technicians (7) assessed the PAs performances from the videotape. If kappa coefficients between the technicians was ≥ 0.6, it was used as "gold standard". *Results:* The technicians agreed well on 9 items regarding the instructions. On the items (encouragement, 'head extended', 'demonstration FVC', 'do not lean' and 'till no air is left') mean percentage adequate was poor (≤ 30%) on the items ('teeth position', 'duration of expiration', 'upright position' and 'lips around mouth piece') mean percentage adequate was fair (≥ 55%). Concerning the lung function measurements the quality, expressed as mean percentage of adequate was poor for quality of encouragement and good for 'lip positioning' and 'air leakage'. On seven items no conclusion could be drawn due to lack of agreement.
Conclusions: Sixteen items could be evaluated. The PAs gave adequate instruction in 'four out of nine' instruction items. For the lung function measurements themselves PAs did not give proper encouragement. They paid enough attention to 'two out of three' evaluable items. The main reason for the low agreement between lung function technicians on assessing the lung function measurement is probably due to the lack of a visual display of the flow volume curve.

P0510

A Survey on the Ability of Doctors to Use Metered Dose Inhalers (MDIs)

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Although it is well known that asthmatic and COPD patients use MDIs poorly, little is known of that on physicians, who are frequently expected to instruct these patients. We have, therefore, carried out this study in a Hong Kong teaching hospital. Fifty two physicians who regularly prescribe MDIs (M:F 32:20; mean age ± SD 28.6 ± 3.9) i.e. more than once/month, were recruited into the study. Each participant was observed to use a MDI attached to an Aerosol Inhalation Monitor (Vitalograph) that was programmed to determine the triggering of the canister, flow rate and duration of inspiration, and duration of breath-holding (3 times). A score of 1 or 0 was respectively attributed if the participant performed correctly or incorrectly on each of the following: shaking of canister, full expiration, correct triggering of MDI, correct duration and flow rate of inhalation, and breath-holding after inhalation. A "test score" was calculated for each participant as the sum of the above individual scores. Questionnaires were also used to assess the "knowledge score" of participants on the use of MDIs on the same parameters. Most participants expressed that they were very or quite confident on their ability to use MDIs before (88.2%) and after (88.2%) the test. Of all the participants only 41.9% shook the canister; 55.8% expired completely before inhalation; 90.4% positioned the mouth piece correctly; 51.9% triggered the MDI correctly; 26.9% inhaled correctly; and 50% held their breath sufficiently after inhalation. The mean test score (± SD) was 9.8 ± 4.8 which correlated with the mean knowledge score of 3.8 ± 1.1 ($r = 0.39$; $p = 0.005$). Only 21.2% of the participants were aware that one minute should elapse before the next dose is taken. The results of this study suggest that physicians who regularly prescribe MDIs have poor ability to use MDIs themselves and this ability correlates with knowledge. Further studies are indicated to evaluate this further and are of utmost important for planning of medical education.

P0511

The Role of Interventional Bronchoscopy in Tracheo-Bronchial Obstruction. Two Years of Experience in Nd: Yag Laser and Stenting of the Central Airways

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Central airways obstruction has multiple etiologies. These obstructions put difficult problems to the bronchoscopist depending on the cause and localization of the stenosis, on symptomatology and on the degree of emergency.
The most common lesion is malignant airway obstruction (77.1% in our series) either by endoluminal exophytic tumor invasion or by extrinsic tumor/mediastinal limph node compression (NSCLC – 59 patients; SCLC – 1 patient; Metastatic Lung Tumor – 7 patients; Rare Pulmonary Neoplasms – 4 patients).
Benign stenosis usually results from intubation trauma or long term ventilation. In our series, a benign origin was present in 22.9% of the cases, mainly due to post-entubation tracheal stenosis. Our experience includes 70 laser treatments in 54 patients, 38 laser plus stent in 30 patients and 12 stent placements in 8 patients, from June 1993 through June 1995. 81.4% of the patients were men and 19.6% women, with ages ranging from 18 to 78 years. Complications to date have been few and we consider them "typical" in such procedures. The overall mortality is 0.83% (1 patient).

P0512

Interference of Erdosteine on Smoke-Induced Antipyrine Oxidation in Healthy Cigarette Smokers: A Controlled Double Blind, Crossover Study Versus Placebo

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The effect of erdosteine, a novel thiol drug, on antipyrine clearance was assessed in